Draft Summary of the Environmental Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
July 28, 2004

The Department of Water Resources (DWR) hosted a meeting for the Environmental Work Group (EWG) on July 28, 2004 in Oroville.

A summary of the discussion, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present a summary for interested parties who could not attend the meeting. The following are attachments to this summary:

Attachment 1	Meeting Agenda
Attachment 2	Meeting Attendees
Attachment 3	Review of Options for Thermalito Afterbay Water Temperature Improvements
Attachment 4	Draft Final Report, SP-W6: Project Effects on Temperature Regime
Attachment 5	Presentation of SP-W9: Project Effects on Natural Protective Processes
Attachment 6	SP-G2, Task 6 Channel Meanders and Bank Erosion Monitoring
Attachment 7	Presentation on SP-G2, Task 6
Attachment 8	SP-G2, Tasks 5 – Dam Effects on Channel Hydraulics and Geomorphology and Task 8 - Summary and Conclusions
Attachment 9	Presentation on SP-G2, Tasks 5 and 8
Attachment 10	Draft Final Report: SP-T3/5 Project Effects on Riparian Resources, Wetlands, and Associated Floodplains
Attachment 11	Presentation on SP-T3/5
Attachment 12	Final Report: SP-F10, Task 2B Evaluation of Potential Effects of Oroville Facilities Operations on Spawning Chinook Salmon
Attachment 13	Presentation on SP-F10, Task 2B
Attachment 14	Final Report SP-F10, Tasks 1D and 1E: Evaluation of Oroville Facilities Operations on Water Temperature-related Effects on Pre-spawning Adult Chinook Salmon and Characterization of Holding Habitat
Attachment 15	Presentation on SP-F10, Tasks 1D and 1E
Attachment 16	Methodology Change to SP-F10, Task 1A and 1B

I. Introduction

Attendees were welcomed to the EWG meeting. Attendees introduced themselves and their affiliations. The desired outcomes of the meeting were discussed as listed on the meeting agenda. There was one modification to the meeting agenda, the report for SP-F3.1, Task 4C was not ready and was not distributed and discussed. The meeting agenda and list of meeting attendees are appended to this summary as Attachments 1 and 2, respectively.

II. Action Items – June 23, 2004 EWG Meeting

Ted Alvarez (DWR) noted that a summary of the June 23, 2004 EWG meeting has been posted on the relicensing web site. The Facilitator reviewed the status of action items from the June EWG meeting as follows:

Action Item #E134: Receive update from Curtis Creel (DWR) on EO1.
Status: Curtis Creel provided an update on EO1 during the Modeling Update (see discussion below).

Action Item #E135:	Provide narrative reports EWG 87, 36, and 37 to Lori Brown for distribution to the EOWG Task Force in advance of their next meeting.
Status:	Lori Brown (DWR) confirmed the distribution.
Action Item #E136:	Develop explanation of changes to original scope of SP-F10 if tasks 1A and 1B are deleted and describe unavailable information related to these tasks.
Status:	This action is discussed as a separate agenda item (see below).

Carry Over

Action Item #E133:	Arrange meeting to review results of Scenario 23 with the EWG.
Status:	This action is discussed during task force meeting update (see below).

III. Modeling Update

Curtis Creel provided the narrative report prepared by the Engineering and Operations Work Group titled "Review of Options for Thermalito Afterbay Water Temperature Improvements" (Attachment 3). He described the potential actions that might increase water temperatures to the agricultural water diversions as falling into one of five categories: convey cold water to the river outlet; convey warm water to the diversion points; increase residence time in the Afterbay; and warm the water entering the diversion canals. The EWG discussed the potential use of Palermo Canal to convey cold water to the fish hatchery and the potential to need supplemental flows in the low flow channel. The diverters are interested in working with NOAA Fisheries and other agencies to achieve a balance that works for both their interests and is supportive of a change in the input temperatures to the Afterbay as a means of achieving warmer temperatures at the diversions.

IV. Resource Action Discussion

Task Force Meeting Updates and Next Meetings

The EWG agreed to hold a video-audio Flow/Temperature Task Force meeting to discuss the results of Scenario 23 on Wednesday, August 4 beginning at 1pm with locations available at the Joint Operations Center and the Resources Building in Sacramento and the Oroville Field Division in Oroville. Telephone conferencing will also be available.

Brad Cavallo (DWR) reported that the Hatchery Task Force meeting originally scheduled for July 20th has been rescheduled for August 17th from 9am-3pm with the location to be determined.

Summary of Matrix Changes

Mike Manwaring (MWH) noted that there have only been a few minor changes to the matrix so he has not provided updated versions but will send a copy to anyone that requests it. Mike Meinz (CDFG) requested a copy of the latest version and will provide his current contact information so Mike Manwaring can send the matrix.

V. Study Deliverables and Implementation Updates

Reports

SP-W6

Jerry Boles reminded the EWG that SP-W9 was provided at the previous meeting and Tom Boullion would be doing a presentation on SP-W9 later in the meeting and that he was going to be discussing SP-W6 (Attachment 4). Jerry pointed out some formatting errors in the report for SP-W6. The study was designed to provide baseline water temperature information to the modeling team as well as answer specific questions such as the effect of pumpback operations on water temperatures. The effect of pump back operations on water temperatures analysis is contained in the report and Jerry indicated that the data set is available to answer additional questions that may arise. The EWG discussed the release structure from Oroville and DWR noted that 750 feet is the deepest from which they can draw water.

SP-W9

Tom Boullion (DWR) provided a presentation on SP-W9 Project Effects on Natural Protective Processes (Attachment 5) and reminded the EWG that the report was distributed at the June EWG meeting. The study focused on the riparian habitat within the Project area and along the Feather River. The EWG discussed water quality parameters that might affect riparian habitats and structure and identified other contributors to Feather River water quality in addition to DWR. The study concluded that while riparian habitat within the Project area is functioning, it could be enhanced in both quantity and structure.

SP-G2, Task 6

Bruce Ross (DWR) provided copies of the Draft Final Report for SP-G2 Task 6: Channel Meanders and Bank Erosion Monitoring (Attachment 6) and provided a presentation on SP-G2, Task 6 (Attachment 7). He also provided CDs containing the Geology Mapping Atlases. He explained the objective of this task was to identify channel meander and bank erosion and he noted that they completed mapping the river's meander belt. The belt indicates the approximate range over which the river has moved over time. The mapping used gross geology and sought to identify appropriate locations to create side-channel habitat, to inject spawning gravels to the system, and to enhance riparian vegetation.

SP-G2, Tasks 5 and 8

Koll Buer (DWR) provided copies of the report for SP-G2, Tasks 5 – Dam Effects on Channel Hydraulics and Geomorphology and Task 8 - Summary and Conclusions (Attachment 8) and provided a presentation on SP-G2, Tasks 5 and 8 (Attachment 8). He briefly reviewed the effort to evaluate the effects of altered downstream hydrology on channel geomorphology and sediment transport below Lake Oroville.

SP-T3/5

Gail Kuenster (DWR) distributed the Draft Final Report: SP-T3/5 Project Effects on Riparian Resources, Wetlands, and Associated Floodplains (Attachment 10) and provided a presentation on SP-T3/5 (Attachment 11). She described the current condition of riparian forests downstream of Oroville Dam as fragmented and narrow, constrained by levees, urbanization and agriculture with large patches of riparian habitat found only in meander bends along the Feather River. The EWG discussed the lack of cottonwood recruitment and the uncertainties concerning existing constraints. Gail noted that extensive wetland vegetation has developed along the wet margin of the Thermalito Afterbay but the large water level fluctuations associated with the operation of Lake Oroville, in addition to steep slopes and poor soil, limit vegetation in the reservoir fluctuation zone. Potential vegetation enhancement areas tend to occur at the same location as existing recreation sites due to favorable slope and reliable water.

SP-F10, Task 2A

Steve Pagliughi (SWRI) distributed the Final Report: Evaluation of Potential Effects of Oroville Facilities Operations on Spawning Chinook Salmon (Attachment 12) and provided a presentation on SP-F10, Task 2A (Attachment 13). The purpose of this task was to evaluate the effects of the Oroville Facilities operational procedures on spawning Chinook salmon in the lower Feather River. Steve reported that pre-spawn mortality estimates in the lower Feather River from 2000 through 2003 were high with annual pre-spawn mortality rates in the LFC and HFC averaging 42.5 percent and 39.7 percent, respectively. Estimates were particularly high in September however it was noted that a small percentage of the total annual spawning population spawned during September. The EWG discussed the combined effects of water temperatures, river flows, disease and angling pressures on pre-spawn mortality rates.

SP-F10, Tasks 1D and 1E

Adrian Pitts (SWRI) distributed the Final Report: Evaluation of Oroville Facilities Operations on Water Temperature-related Effects on Pre-spawning Adult Chinook Salmon and

Characterization of Holding Habitat (Attachment 14) and provided a presentation on SP-F10, Tasks 1D and 1E (Attachment 15). Adrian explained the overlap in the scope of these two tasks and the reason that results are presented together. The objective of Task 1E is to identify and characterize adult early up-migrant (Spring-run) Chinook salmon holding habitat and use patterns in the lower Feather River below the Thermalito Diversion Dam. The purpose of Task 1D is to evaluate the effects of Oroville Facilities operations on water temperature-related effects on pre-spawning salmonid adult production. Adrian reported that daily and weekly thermograph water temperature data never exceeded the index value of 20°C (68°F) during the 2003 adult Spring-run Chinook salmon immigration and holding period. The EWG discussed how profile data was compiled and how pools were selected.

Methodology Change

SP-F10, Task 1A and 1B

Dave Olson described how a modification to the SP-F10 study plan to delete tasks 1A and 1B would change from the original scope and what information was not available (Attachment 16). The EWG discussed if the necessary data could be collected through an adaptive management program during the next licensing period. The EWG agreed to modify the study plan as long as the topic could be discussed at the settlement negotiation table in terms of an additional study within an adaptive management strategy.

The EWG agreed to defer discussion of SP-F10, Tasks 2C and 2D, and SP-F3.2, Task 3B until the next EWG meeting.

VII. Next Steps

The participants agreed that the next EWG meeting would be:

Date: August 25, 2004
Time: 9:00 a.m. – 4:00 p.m.
Location: Oroville Field Division

Action Items

The following action items identified by the EWG include a description of the action, the participant responsible for the action, and due date.

Action Item #E137: Provide copy of matrix to Mike Meinz (CDFG)
Responsible: MWH
Due Date: August 25, 2004